

CENTRAL INTELLIGENCE AGENCY

~~CONFIDENTIAL INFORMATION REPORT~~

REPORT

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DRAFT: Production of Oxalic Acid at Bitterfeld

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1. Monthly production of oxalic acid at Bitterfeld has been 120 tons since November 1945. The total output goes to the USSR as reparations. Four reaction plants (Reaktionsapparate aus V2A) are in operation.
2. The production process is as follows: One ton of white sugar is added to 12 cubic meters of an acid mixture consisting of 22% nitric acid and 32% sulphuric acid. The temperature is maintained at 32° while the main reaction is in progress and at 55-60° during the secondary reaction. During this latter reaction a further 800 kg of sugar is added in 16 charges of 50 kg each. The mixture is cooled in a calcium chloride cooling bath to -5 to -60°.
3. The crude acid is centrifuged (abgeschleudert) and recrystallized in the North Works, about 400-450 gms per liter being produced at 80°. It is dried at 55° in a batch drying furnace (Etagentrockenofen).
4. The mother liquor containing 4% sulphuric acid and 0-1% nitric acid is further enriched by oxidation of the nitric oxide in oxidation towers; after the first tower the liquor contains 2-3% nitric acid, in the second 10-12% and in the third 20-22%. The towers are those usually found in a nitric acid plant. There are 75-100 cubic meters of acid in circulation. Eighty kg nitric acid and 80 kg sulphur trioxide per ton of oxalic acid have to be added to make up for losses.
5. Total requirements of raw materials per ton of oxalic acid are:

|  |        |
|--|--------|
| White sugar                                    | 750 kg |
| Nitric acid (NH <sub>4</sub> NO <sub>3</sub> ) | 80 kg  |
| Sulphur trioxide (SO <sub>3</sub> )            | 80 kg  |

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